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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/809,153	03/25/2004	Manabu Koike	4041P-000055	7401

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EXAMINER

SHECHTMAN, SEAN P

ART UNIT	PAPER NUMBER
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2125

DATE MAILED: 02/07/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/809,153	KOIKE ET AL.	
	Examiner	Art Unit	
	Seán P. Shechtman	2125	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 June 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-29 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-29 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>3/25/04</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Claims 1-29 are presented for examination.

Priority

2. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Specification

3. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

Claim Objections

4. Claims 8 and 24 are objected to because of the following informalities: In line 27, and line 7, respectively, "unlading" should be rephrased "unloading". Appropriate correction is required.
5. A series of singular dependent claims is permissible in which a dependent claim refers to a preceding claim which, in turn, refers to another preceding claim. A claim which depends from a dependent claim should not be separated by any claim which does not also depend from said dependent claim. It should be kept in mind that a dependent claim may refer to any preceding independent claim. In general, applicant's sequence will not be changed. See MPEP § 608.01(n).

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

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Claims 1-29 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

6. Claim 1 recites the limitation "each manufacturing lot" in line 5. Claim 2 recites the limitation "each manufacturing lot" in line 13. Claim 3 recites the limitation "said plurality of lots" in line 28. Claim 3 recites the limitation "said workpieces contained in said plurality of lots" in lines 27-28. Claim 5 recites the limitation "said plurality of lots" in line 11. Claim 5 recites the limitation "said workpieces contained in said plurality of lots" in line 11. Claim 6 recites the limitation "the next manufacturing process flow" in line 17. Claim 7 recites the limitation "the plurality of lots" in lines 21-22. Claim 8 recites the limitation "the plurality of lots" in line 30. Claim 9 recites the limitation "the plurality of lots" in lines 7-8. Claim 9 recites the limitation "the workpiece contained in the plurality of lots" in lines 7-8. Claim 13 recites the limitation "the plurality of lots" in line 24. There is insufficient antecedent basis for these limitations in the claims.

7. The term "appropriate" in claims 1, 2, and 18 is a relative term which renders the claims indefinite. The term "appropriate" is not defined by the claims, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. The number of manufacturing lots on a carrier has been rendered indefinite by the use of the term appropriate.

8. The term "similar" in claim 2 is a relative term which renders the claim indefinite. The term "similar" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would

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not be reasonably apprised of the scope of the invention. The type of manufacturing lost loaded on a carrier has been rendered indefinite by the use of the term similar.

9. The term "easily" in claim 13 is a relative term which renders the claim indefinite. The term "easily" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. The extent to which the workpieces cannot be separated has been rendered indefinite by the use of the term easily.

10. The term "old" in claim 17 is a relative term which renders the claim indefinite. The term "old" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. The requirements of the system has been rendered indefinite by the use of the term old.

11. The term "new" in claim 17 is a relative term which renders the claim indefinite. The term "new" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. The requirements of the system has been rendered indefinite by the use of the term new.

12. Claims 3, 5, 8, 9, 10, requires the limitation of "said apparatus", however, claim 2 requires the limitations of a batch apparatus and an apparatus, therefore it is not clear which apparatus is "said apparatus".

13. Claim 6 requires the limitation of unloading workpieces of a specific lot beforehand when said specific lot cannot be processed together with other lots in the next

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manufacturing process flow, however, claim 1, from which claim 6 depends, requires the limitation of causing the workpieces in lots to pass along a plurality of manufacturing process flows. Therefore, it is not clear how the workpieces can be required to pass along a plurality of manufacturing process flows if they are unloaded beforehand. Claim 19 contains similar limitations.

14. Due to the number of 35 USC § 112 rejections, the examiner has provided a number of examples of the claim deficiencies in the above rejections, however, the list of rejections may not be all inclusive. Applicant should refer to these rejections as examples of deficiencies and should make all the necessary corrections to eliminate the 35 USC § 112 problems and place the claims in proper format.

15. Due to the vagueness and a lack of clear definition of the terminology and phrases used in the specification and claims, the claims have been treated on their merits as best understood by the examiner.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

16. Claims 1, 13, and 17 are rejected under 35 U.S.C. 102(b) as being anticipated by Applicant's Admitted Prior Art (AAPA).

Referring to claim 1, AAPA teaches designating each manufacturing lot containing a workpiece as a main objective to be managed (See Fig. 4 and corresponding description, paragraph 55); and loading an appropriate number of manufacturing lot (See

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the Fig. 4) on a carrier (See Fig. 18) so as to cause said workpieces contained in respective manufacturing lots to pass along a plurality of manufacturing process flows (See description of the lot batch processing apparatus in page 13, line 28 – page 14, line 2).

Referring to claim 13, AAPA teaches the manufacturing managing method in accordance with claim 1, wherein the workpieces contained in the plurality of lots and once loaded on said carrier are managed as a lot group not being easily separable (See Fig. 4).

Referring to claim 17, AAPA teaches Fig. 4 with an old system and not a new system, therefore, there is no coexistence.

17. Claims 1-8, 13, 18-24 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Pat. No. 5,980,591 to Akimoto.

Referring to claims 1, 2, and 18, Akimoto teaches designating each manufacturing lot containing a workpiece as a main objective to be managed (figs. 24-29; Col. 31, line 45 – Col. 36, line 4); loading an appropriate number of one similar type manufacturing lots (See fig. 24, C2; Col. 32, lines 10-11) and an appropriate number of different type manufacturing lots on a carrier (See fig. 24, C3; Col. 32, lines 17-20), said similar type manufacturing lots containing workpieces having the same work conditions in a work step (See fig. 24) and said different type manufacturing lots containing workpieces having different work conditions (See fig. 24); and transporting said carrier to a batch apparatus that performs simultaneous processing *or* machining operation applied to said workpieces *or* to an apparatus that brings said workpieces into an in-process work step

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under the same or different conditions (Fig. 22-23; Col. 32, line 21 – Col. 33, line 46), so as to cause said workpieces contained in respective similar or different type manufacturing lots to pass along a plurality of manufacturing process flows (Col. 31, lines 45-50; Col. 35, lines 42-63; Col. 24, lines 52-64; Fig. 29).

Referring to claim 13, Akimoto teaches the manufacturing managing method in accordance with claim 1, wherein the workpieces contained in the plurality of lots and once loaded on said carrier are managed as a lot group not being easily separable (Fig. 24, C2).

Referring to claim 16, Akimoto teaches the manufacturing managing method in accordance with claim 1, wherein a loading of workpieces contained in other lots is prohibited when a specific lot to be processed urgently is loaded on said carrier (Fig. 14; Col. 38, lines 13-17).

Referring to claims 3 and 19, Akimoto teaches the manufacturing managing method in accordance with claim 2, further comprising a step of making a judgment before starting the in-process work step in said apparatus as to whether or not said workpieces contained in said plurality of lots should be loaded on said carrier (Col. 32, lines 29-40).

Referring to claims 4 and 20, Akimoto teaches the manufacturing managing method in accordance with claim 3, further comprising a step of further loading additional workpieces of at least one lot on the carrier under a condition that the workpieces contained in said plurality of lots are already loaded on the carrier before said carrier is transported to an apparatus that has the capability of processing an increased number of workpieces (Col. 32, lines 29-40).

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Referring to claims 5 and 21, Akimoto teaches the manufacturing managing method in accordance with claim 2, further comprising a step of making a judgment after finishing the in-process work step in said apparatus as to whether or not the workpieces of a predetermined number of lots should be unloaded from said carrier under a condition that the workpieces contained in said plurality of lots are loaded on said carrier (Col. 32, lines 29-40).

Referring to claims 6 and 22, Akimoto teaches the manufacturing managing method in accordance with claim 5, further comprising a step of unloading the workpieces of a specific lot beforehand when said specific lot cannot be processed together with other lots in the next manufacturing process flow (Col. 32, lines 41-55).

Referring to claims 7 and 23, Akimoto teaches the manufacturing managing method in accordance with claim 2, further comprising a step of unloading the workpieces of at least one specific lot under a condition that the workpieces contained in the plurality of lots are already loaded on said carrier and a step of loading required workpieces of another lots on said carrier, thereby repacking the workpieces on the carrier before starting the in-process work step in said apparatus (Col. 31, lines 27-41).

Referring to claims 8 and 24, Akimoto teaches the manufacturing managing method in accordance with claim 2, further comprising a step of unloading part of workpieces in the same lot before starting the in-process work step in said apparatus in such a manner that an original lot number of each unloaded workpiece can be identified later from a condition that the workpieces contained in the plurality of lots are loaded on said carrier, and a step of loading another workpieces of at least one new lot on said carrier (Fig. 25).

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18. Claims 1-3, 5, 8, 10-15, 18, 19, 21, 24, 26-29 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Pat. No. 6,449,522 to Conboy.

Referring to claims 1, 2, and 18, Conboy teaches designating each manufacturing lot containing a workpiece as a main objective to be managed (Abstract); loading (Col. 3, lines 6-9; Col. 3, lines 35-40; Col. 4, lines 55-64) an appropriate number of similar type manufacturing lots and an appropriate number of different type manufacturing lots on a carrier (Col. 4, lines 1-7; Col. 7, lines 45-47), said similar type manufacturing lots containing workpieces having the same work conditions in a work step and said different type manufacturing lots containing workpieces having different work conditions (Col. 4, lines 1-7); and transporting said carrier to a batch apparatus that performs simultaneous processing *or* machining operation applied to said workpieces *or* to an apparatus that brings said workpieces into an in-process work step under the same or different conditions (Col. 8, lines 6-15), so as to cause said workpieces contained in respective similar or different type manufacturing lots to pass along a plurality of manufacturing process flows (Col. 3, lines 13-25).

Referring to claim 13, Conboy teaches the manufacturing managing method in accordance with claim 1, wherein the workpieces contained in the plurality of lots and once loaded on said carrier are managed as a lot group not being easily separable (Col. 9, lines 48-54).

Referring to claim 14, Conboy teaches the manufacturing managing method in accordance with claim 1, wherein a loading of workpieces onto said carrier by using a new lot is prohibited (Col. 7, lines 47-65).

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Referring to claims 3 and 19, Conboy teaches the manufacturing managing method in accordance with claim 2, further comprising a step of making a judgment before starting the in-process work step in said apparatus as to whether or not said workpieces contained in said plurality of lots should be loaded on said carrier (Col. 5, lines 10-20).

Referring to claim 5 and 21, Conboy teaches the manufacturing managing method in accordance with claim 2, further comprising a step of making a judgment after finishing the in-process work step in said apparatus as to whether or not the workpieces of a predetermined number of lots should be unloaded from said carrier under a condition that the workpieces contained in said plurality of lots are loaded on said carrier (Col. 8, lines 7-15).

Referring to claim 8 and 24, Conboy teaches the manufacturing managing method in accordance with claim 2, further comprising a step of unloading part of workpieces in the same lot before starting the in-process work step in said apparatus in such a manner that an original lot number of each unloaded workpiece can be identified later from a condition that the workpieces contained in the plurality of lots are loaded on said carrier, and a step of loading another workpieces of at least one new lot on said carrier (Col. 3, lines 1-12).

Referring to claims 10, 11, 12, 26, 27, 28, Conboy teaches the manufacturing managing method in accordance with claim 2, wherein said apparatus restricts the loading of workpieces contained in a plurality of lots onto said carrier based on a carrier type and on at least either one of a product name and a fundamental process flow (Col. 7, lines 45-65).

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Referring to claims 15 and 29, Conboy teaches the manufacturing managing method in accordance with claim 8, wherein a specific lot is continuously loaded on the same carrier when unloading of said specific lot is prohibited beforehand (Col. 7, lines 35-51).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

19. Claims 9 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Pat. No. 5,980,591 to Akimoto or U.S. Pat. No. 6,449,522 to Conboy as applied to claim 2 above, and further in view of U.S. Pat. No. 5,856,923 to Jones.

Referring to claims 9 and 25, Akimoto and Conboy teach all the limitations set forth above, however, fails to teach temporarily stopping or decelerating said carrier at a mix-loading waiting point provided adjacent to said apparatus and a step of make a judgment as to whether or not the workpiece contained in the plurality of lots are loadable on said carrier.

However, referring to claims 9 and 25, Jones teaches analogous art, including temporarily stopping or decelerating a carrier at a mix-loading waiting point provided adjacent to a workpiece processing apparatus and a step of make a judgment as to whether or not the workpiece contained in the plurality of lots are loadable on said carrier (Col. 4, lines 35-60).

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Therefore, it would have been obvious to one of ordinary skill in the art at the time that the invention was made to modify the teachings of Akimoto or Conboy with the teachings of Jones. One of ordinary skill in the art would have been motivated to combine these references because Jones teaches tracking IC devices in a continuous flow from multiple lots through plural manufacturing steps so that manufacturing resources are used more efficiently (Col. 3, lines 46-56).

Conclusion

20. The prior art or art made of record and not relied upon is considered pertinent to applicant's disclosure.

The following patents or publications are cited to further show the state of the art with respect to a workpiece carrier or independently controlled workpiece processing.

U.S. Pat. No. 3,730,595 to Yakubowski.

U.S. Pat. No. 4,027,246 to Caccoma.

21. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sean P. Shechtman whose telephone number is (571) 272-3754. The examiner can normally be reached on 9:30am-6:00pm, M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Leo P. Picard can be reached on (571) 272-3749. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

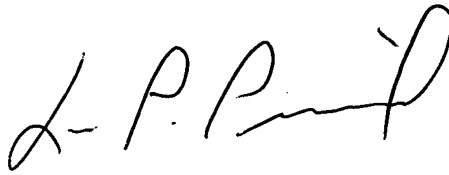
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SPS

Sean P. Shechtman

January 24, 2005

A handwritten signature in black ink, appearing to read 'L. P. Picard', with a stylized flourish at the end.

LEO PICARD
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100